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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/698,479	10/30/2000	Vance Bergeron	APV30270CIP	6625

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STEVENS, DAVIS, MILLER & MOSHER, L.L.P.
1615 L Street N.W., Suite 850
Washington, DC 20036

EXAMINER

CHEUNG, WILLIAM K

ART UNIT	PAPER NUMBER
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1713

MAIL DATE	DELIVERY MODE
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09/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/698,479	Applicant(s) BERGERON ET AL.	
	Examiner William K. Cheung	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/5/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-15,17-41 and 43-48 is/are pending in the application.
- 4a) Of the above claim(s) 14,15 and 19-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-13,17,18 and 43-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Request for Continued Examination

1. The request filed on July 5, 2007 for a Request for Continued Examination (RCE) under 37 CFR 1.53(d) based on parent Application No. 09/698,479 is acceptable and a RCE has been established. An action on the RCE follows.

2. In view of the amendment of May 4, 2007, claim 5, 16, 42 have been cancelled. Claims 1-4, 6-15, 17-41, 43-48 are pending. Claims 14-15, 19-41 are drawn to non-elected subject matter. Claims 1-4, 6-13, 17, 18, 43-48 are examined with merit.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-4, 6-13, 17, 18, 43-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 6 (line 3), claim 7 (penultimate line), the recitation "weight average" is considered "new matter" because the recited "weight average" is not supported by the original specification. Applicants are required to submit an amendment to remove the "new matter" added.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-4, 6-13, 17, 18, 43-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 (page 5 of the amendment of October 2, 2006, the last two lines of claim 7), the recitation "the molecular weight of the polymer is in the range of about 10,000 to about 300,000 daltons" is considered indefinite. Applicants must recognize that a polymer having the same molecular weight can be characterized by a number-average molecular weight and/or a weight-average molecular weight. Without such clarification, the recited molecular weight of claim 7 is considered indefinite because one of ordinary skill in art would not know which type of molecular weight property are being referred to.

Applicant's arguments filed July 5, 2007 have been fully considered but they are not persuasive. Applicants argue that the Declaration filed May 4, 2007 is adequately to put to modify the original specification filed. However, the examiner disagrees. Regarding applicants' argument July 5, 2007 and Declaration filed May 4, 2007 that the molecular weight as claimed are weight average molecular weight by default, applicants fail to recognize that the specification and the original set of claims as written do not provide the support for such argument.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 1-13, 17-18, 43 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fink et al. (US 4,542,175) for the reasons adequately set forth from paragraph 6 of the office action of November 8, 2006.

Applicant's arguments filed in the Declaration of July 5, 2007 have been fully considered but they are not persuasive. Applicants argue that both Fink et al. and the instantly claimed invention use the traditional standards of using weight average molecular weight for describing the molecular weights of polymers. However, applicants fail to submit any reference materials stating the traditional molecular weight characterizations are done in weight averages, instead of number averages that are typically used for low molecular weight compounds.

Because the argument filed in the Declaration filed May 4, 2007 are found not persuasive, the instant 102-3 rejection set forth is maintained.

Even assuming that the examiner has accepted the amendment filed May 4, 2007, Claims 1-13, 17-18, 43 would still be rejected 103 portion of the 102-3 rejection set forth. Applicants must recognize that Fink et al. clearly disclose the composition qualitatively as claimed. The minor change in molecular weight as compared to disclosed composition is considered obvious motivated by the expectation that polymers having different molecular weight would have different utilities. Applicants must recognize that the polymer prepared by Fink et al. must have gone through the low molecular weight polymers before reaching the high molecular weight as disclosed.

Regarding applicants' argument that the claimed polymer is among the many polymers disclosed in Fink et al., and applicants argue that the polymers disclosed in Fink et al. are not the preferable teachings of Fink et al., applicants must recognize that the claimed polymers are still clearly disclosed in Fink et al.

Regarding claims 10, 13, 45, and 48, applicants argue that Fink et al. are silent on the molar ratios as claimed because Fink et al. (col. 6, line 20-24) state that the water soluble monomer, not amounting to more than 30 percent by weight of the synthetic polymer, applicants must recognize that the claims 10, 13, 45, and 48 as written, the ratios do not exclude water soluble monomer of less than 30 weight percent.

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Regarding claims 1, 2, applicants argue that Fink et al. do not disclose the cationic charge density as claimed, and regarding applicants' argument that Fink et al. do not disclose a acrylic acid monomer that is required by claims 10, 12, 17, 40, 45, 46, and 48, applicants must recognize that Fink et al. (col. 5, line 3 to col. 6, line 42) disclose terpolymers comprising monomeric units, DMAm, HEA, and AA which meet all the structure features as claimed. In view of the substantially identical composition, the examiner has a reasonable basis to believe that the claimed average cationic charge density, pH, hydroxyl group density, anionic charge at pH from about 4 to about 12 are inherently possessed in Fink et al. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

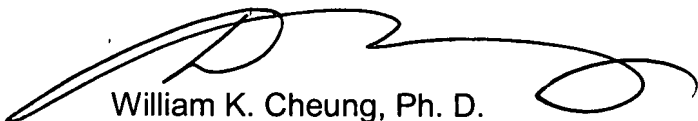
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William K. Cheung, Ph. D.

Primary Examiner

November 4, 2006

WILLIAM K. CHEUNG
PRIMARY EXAMINER